

Abstract Of The Disclosure

[0056] A stability control system (18) for an automotive vehicle includes a plurality of sensors (28-39) sensing the dynamic conditions of the vehicle. The sensors may include a speed sensor (20), a lateral acceleration sensor (32), a roll rate sensor (34), a yaw rate sensor (20) and a longitudinal acceleration sensor (36). The controller (26) is coupled to the speed sensor (20), the lateral acceleration sensor (32), the roll rate sensor (34), the yaw rate sensor (28) and a longitudinal acceleration sensor (36). The controller (26) determines a global roll attitude and a global pitch attitude from the roll rate, lateral acceleration signal and the longitudinal acceleration signal. The controller determines a roll gradient based upon a past raw roll rate and current raw roll rate, the roll angular rate signal and the lateral acceleration signal, a pitch gradient based upon a past raw pitch rate and current raw pitch rate the calculated pitch angular rate signal and the longitudinal acceleration signal. The controller determines a relative roll and relative pitch as a function of the roll gradient and the pitch gradient.